## Cellular Defenses - Talking Points

- ➤ Apoptosis is derived from IL-32
- ➤ Qualified computational biologists can verify the following sources:
  - ✓ Pyroptosis is derived from neuropeptide Y (aka IL-12) Caspases 4 6
  - ✓ Necroptosis is a byproduct of pancreatic polypeptide (aka IL-16) Caspases 7 9
  - ✓ Ferroptosis is derived from peptide YY (aka IL-13) Caspases 1 3

Chirality of apoptosis is regulated by the nitric oxide based MEK path (NPY) and the hydrogen sulfide based ERK path (pancreatic polypeptide).